

EIC 1700 / LUTRELLE F. PARKER LAW LIBRARY



*Scientific and Technical Information Center*

### Search Results Feedback Form

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact the searcher whose name is circled below.

Kathleen Fuller 308-4290

John Caive 308-4139

Barba Koroma 305-3542

Eric Linnell 308-4143

All searchers are located in the library in CP3/4 3D62

# EIC1700

## Search Results

### Feedback Form (Optional)



Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact *the EIC searcher* who conducted the search *or contact*:

Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

---

#### *Voluntary Results Feedback Form*

➤ *I am an examiner in Workgroup:*

*Example:*

➤ *Relevant prior art found, search results used as follows:*

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Search results were not useful in determining patentability or understanding the invention.

**Other Comments:**

---

Drop off completed forms in CP3/4 - 3D62 .

=> file reg

FILE 'REGISTRY' ENTERED AT 11:14:44 ON 26 MAR 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 25 MAR 2003 HIGHEST RN 500688-79-9  
DICTIONARY FILE UPDATES: 25 MAR 2003 HIGHEST RN 500688-79-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> file caplus

FILE 'CAPLUS' ENTERED AT 11:14:48 ON 26 MAR 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is  
held by the publishers listed in the PUBLISHER (PB) field (available  
for records published or updated in Chemical Abstracts after December  
26, 1996), unless otherwise indicated in the original publications.  
The CA Lexicon is the copyrighted intellectual property of the  
American Chemical Society and is provided to assist you in searching  
databases on STN. Any dissemination, distribution, copying, or storing  
of this information, without the prior written consent of CAS, is  
strictly prohibited.

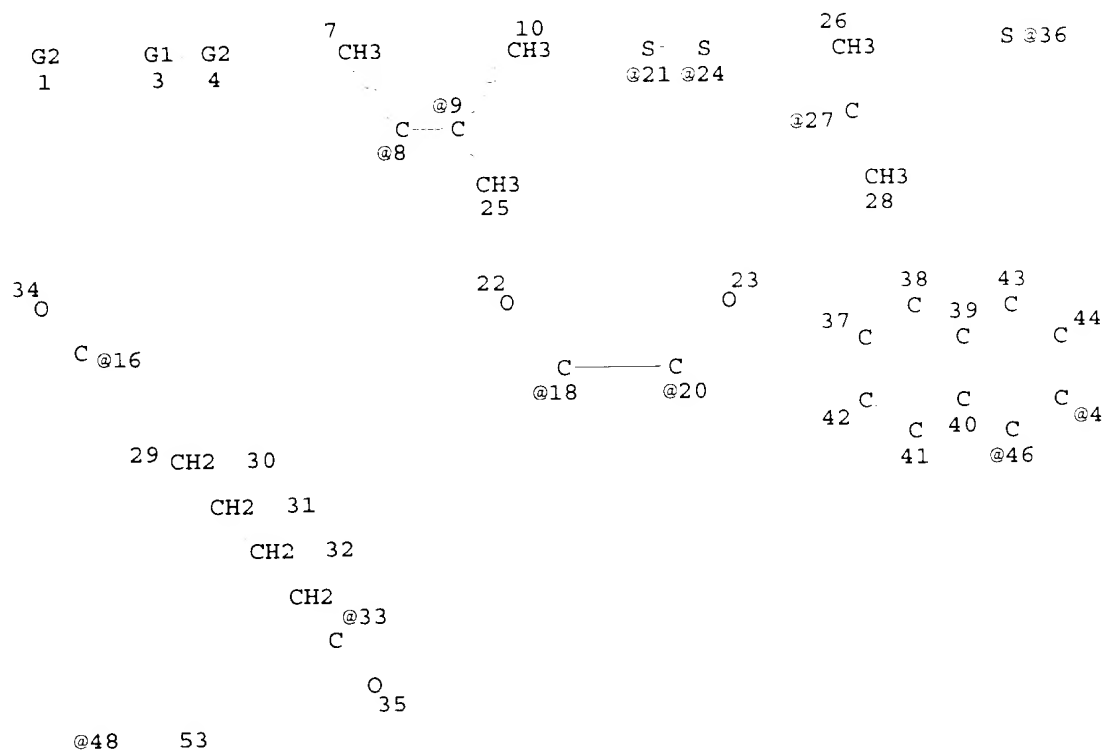
FILE COVERS 1907 - 26 Mar 2003 VOL 138 ISS 13  
FILE LAST UPDATED: 25 Mar 2003 (20030325/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que

L1 SCR 1841  
L2 STR

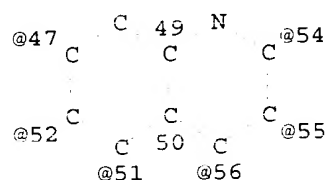
KOROMA EIC1700



Page 1-A

5

Page 1-B



Page 2-A

VAR G1=27/16-1 33-4/18-1 20-4/8-1 9-4/21-1 24-4/36

VAR G2=46/45/54/55/56/51/52/47/48

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 46

STEREO ATTRIBUTES: NONE

KOROMA EIC1700

L3 1072 SEA FILE=REGISTRY SSS FUL L2 AND L1  
 L4 975 SEA FILE=CAPLUS ABB=ON PLU=ON L3  
 L5 3 SEA FILE=CAPLUS ABB=ON PLU=ON LUBRICA? AND L4  
 L6 79 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND COMPOS?  
 L7 1 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND OIL#  
 L8 0 SEA FILE=CAPLUS ABB=ON PLU=ON GREAS? AND L6  
 L9 0 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND SOOT#  
 L10 1 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND FOSSIL FUEL#/SC,SX  
 L11 2 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND (PETROL? OR FUEL OR  
 PARAFFIN#)  
 L14 4 SEA FILE=CAPLUS ABB=ON PLU=ON L5 OR (L7 OR L8 OR L9 OR L10  
 OR L11)  
 L15 3 SEA FILE=REGISTRY ABB=ON PLU=ON 91-22-5 OR 91-20-3 OR  
 38641-16-6  
 L16 39212 SEA FILE=CAPLUS ABB=ON PLU=ON L15  
 L17 6108 SEA FILE=CAPLUS ABB=ON PLU=ON L16(L)RCT/RL  
 L18 41 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND LUBRICA?  
 L19 9 SEA FILE=CAPLUS ABB=ON PLU=ON L18 AND COMPOS?  
 L20 261 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (GREAS# OR OIL# OR  
 SOOT#)  
 L21 31 SEA FILE=CAPLUS ABB=ON PLU=ON L20 AND COMPOS?  
 L22 23 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND FOSSIL FUELS/SC,SX  
 L23 3 SEA FILE=CAPLUS ABB=ON PLU=ON DISPERS? AND L22  
 L24 15 SEA FILE=CAPLUS ABB=ON PLU=ON L19 OR L23 OR L14

=> d ibib abs hitstr ind total

L24 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:575176 CAPLUS

DOCUMENT NUMBER: 137:142843

TITLE: Lubricating oil  
composition

INVENTOR(S): Gutierrez, Antonio; Bloch, Ricardo A.; Diggs, Nancy  
Z.; Girshick, Fredrick W.; Martella, David J.;  
Stevens, Mark G.; Emert, Jacob

PATENT ASSIGNEE(S): Infineum USA L.P., USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002059239	A2	20020801	WO 2001 1B2845	20011206
W: CA, CN, JP, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002115575	A1	20020822	US 2000-746044	20001222
PRIORITY APPLN. INFO.:			US 2000-746044	A 20001222

KOROMA EIC1700

AB Lubricating oil compns. providing superior  
 soot dispersing characteristics, which contain a  
 combination of a high mol. wt. dispersant and a soot  
 dispersant comprising a linked arom. oligomer.  
 IT 91-20-3, Naphthalene, reactions 91-22-5, Quinoline,  
 reactions 38641-16-6, Dodecyl naphthalene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (lubricating oil soot dispersant  
 )  
 RN 91-20-3 CAPLUS  
 CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



RN 91-22-5 CAPLUS  
 CN Quinoline (8CI, 9CI) (CA INDEX NAME)



RN 38641-16-6 CAPLUS  
 CN Naphthalene, dodecyl- (9CI) (CA INDEX NAME)



Me-(CH<sub>2</sub>)<sub>11</sub>-D1

IC ICM C10M  
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)  
 ST lubricating oil soot dispersant  
 IT Lubricating oils  
 Soot  
 (lubricating oil soot dispersant  
 )  
 IT Lubricating oil additives  
 (soot dispersants; lubricating  
 oil soot dispersant)  
 IT 7637-07-2, Boron trifluoride, uses

KOROMA EIC1700

RL: CAT (Catalyst use); USES (Uses)  
 (lubricating oil soot dispersant  
 )

IT 444648-44-6P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)

(lubricating oil soot dispersant  
 )

IT 75-09-2, Methylene chloride, reactions 91-20-3, Naphthalene,  
 reactions 91-22-5, Quinoline, reactions 111-50-2, Adipoyl  
 chloride 112-88-9, 1-Octadecene 144-55-8, Sodium bicarbonate,  
 reactions 7446-70-0, Aluminum chloride, reactions 27070-58-2,  
 Octadecene 38641-16-6, Dodecyl naphthalene 444667-27-0, F 20X

RL: RCT (Reactant); RACT (Reactant or reagent)

(lubricating oil soot dispersant  
 )

IT 142-82-5, Heptane, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(solvent; lubricating oil soot  
 dispersant)

L24 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:51582 CAPLUS

DOCUMENT NUMBER: 136:120896

TITLE: **Compositions** of Group II and/or Group III  
 base oils and alkylated fused and/or polyfused  
 aromatic compounds

INVENTOR(S): Hessell, Edward T.; Abramshe, Richard A.; Gallacher,  
 Lawrence V.

PATENT ASSIGNEE(S): King Industries, USA

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004578	A1	20020117	WO 2001-US21246	20010705
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2001075863	A5	20020121	AU 2001-75863	20010705
PRIORITY APPLN. INFO.:			US 2000-217478P	P 20000711
			WO 2001-US21246	W 20010705
AB <b>Compns.</b> including blends of Group II and/or Group III base oils				

and alkylated fused and/or polyfused arom. **compns.**, such as alkylated naphthalenes are provided. The use of such **compns.**, which exhibit excellent additive solvency, thermo-oxidative stability, hydrolytic stability, and seal swell characteristics, as **lubricants** is disclosed.

IT 91-20-3, Naphthalene, reactions 91-20-3D, Naphthalene, alkyl derivs.

RL: **RCT (Reactant)**; RACT (Reactant or reagent)  
(**compns.** of Group II and/or Group III base oils and alkylated fused and/or polyfused arom. compds.)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



IC ICM C10M101-02

ICS C10M105-04; C10M111-02

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

ST lubricating oil polycyclic arom compd

IT Lubricating oils

(**compns.** of Group II and/or Group III base oils and alkylated fused and/or polyfused arom. compds.)

IT 7446-70-0, Aluminum chloride, uses

RL: CAT (Catalyst use); USES (Uses)

(**compns.** of Group II and/or Group III base oils and alkylated fused and/or polyfused arom. compds.)

IT 56-55-3, Benzanthrene 85-01-8, Phenanthrene, reactions 91-20-3, Naphthalene, reactions 91-20-3D, Naphthalene, alkyl derivs.

95-13-6, Indene 112-41-4, 1-Dodecene 120-12-7, Anthracene, reactions 129-00-0, Pyrene, reactions 208-96-8, Acenaphthylene 217-59-4,

Triphenylene 218-01-9, Chrysene 629-73-2, 1-Hexadecene 1120-36-1,

1-Tetradecene 6842-15-5, Tetrapropylene 389870-07-9, NA-Lube KR 012 389872-93-9, UCBO 7R 389872-97-3, NA-Lube AO 140 389873 10-3, NA-Lube

AO 240 389873-16-9, NA-Lube KX 1070

RL: **RCT (Reactant)**; RACT (Reactant or reagent)

(**compns.** of Group II and/or Group III base oils and alkylated fused and/or polyfused arom. compds.)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L24 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:885972 CAPLUS

DOCUMENT NUMBER: 136:21817

TITLE: Phenylcycloalkylmethyl ammonium cations as templates  
for synthesis of SSZ-53 zeolites as petroleum refining  
catalysts

INVENTOR(S): Elomari, Saleh

PATENT ASSIGNEE(S): Chevron U.S.A. Inc., USA

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092155	A1	20011206	WO 2001-US12570	20010417
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1289885	A1	20030312	EP 2001-930562	20010417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:				
US 2000-584187 A 20000531 WO 2001-US12570 W 20010417				
AB A novel cryst. zeolite, SSZ-53, prepd. from phenylcycloalkylmethyl ammonium cations as structure directing agents, and is characterized by a mole ratio of >20:1 of a first tetravalent oxide to a second tetravalent oxide (which is different from the first tetravalent oxide) and other metal oxides (e.g., of a trivalent oxide and a pentavalent oxide). The calcined zeolite has an x-ray diffraction pattern of: [2.theta. (.degree.): d spacing (.ANG.): relative intensity]: (1) 6.65 .+- . 0.15: 13.3: very strong; (2) 8.3 .+- . 0.15: 10.6: strong; (3) 17.75 .+- . 0.15: 4.99: medium; (4) 19.7 .+- . 0.15: 4.50: medium; (5) 21.0 .+- . 0.15: 4.23: medium. The zeolites have a <b>compn.</b> , as synthesized and in the anhyd. state, of the following mole ratios: (1) YO <sub>2</sub> -WcOd 20-150:1; (2) M <sub>2</sub> /n-YO <sub>2</sub> 0.01-0.03:1; and (3) Q-YO <sub>2</sub> 0.02-0.05:1, in which Y = Si, Ge; W = Al, Ga, Fe, B, Ti, In, V; c = 1 or 2; d = 2 when c = 1; d is 3 or 5 when c = 2; M is an alkali metal cation, alk. earth metal cation, n is the valence of M, and Q is a phenylcycloalkylmethylammonium cation (template). Such zeolites are suitable as redn. catalysts for NO <sub>x</sub> in exhaust gases, and as petroleum refining catalysts (e.g., hydrocracking, isomerization, aroms. alkylation and isomerization, etc.). IT 91-20-3D, Naphthalene, derivs.				

RL: PEP (Physical, engineering or chemical process); RCT  
(Reactant); PROC (Process); RACT (Reactant or reagent)  
(alkylation of; phenylcycloalkylmethyl ammonium cations as templates  
for synthesis of SSZ-53 zeolites as petroleum refining catalysts)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)

IC ICM C01B039-48

CC 51-9 (Fossil Fuels, Derivatives, and Related Products)  
Section cross-reference(s): 49, 59

ST SSZ53 zeolite synthesis catalyst phenylcycloalkylmethyl ammonium template;  
petroleum refining catalyst SSZ53 zeolite synthesis; exhaust gas nitrogen  
oxide redn catalyst SSZ53 zeolite

IT Alkenes, reactions  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
(Process); RACT (Reactant or reagent)  
(C20+, isomerization of; phenylcycloalkylmethyl ammonium cations as  
templates for synthesis of SSZ-53 zeolites as petroleum refining  
catalysts)

IT Alkanes, reactions  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
(Process); RACT (Reactant or reagent)  
(C4-7, isomerization of; phenylcycloalkylmethyl ammonium cations as  
templates for synthesis of SSZ-53 zeolites as petroleum refining  
catalysts)

IT Exhaust gases (engine)  
(NOx removal from; phenylcycloalkylmethyl ammonium cations as templates  
for synthesis of SSZ-53 zeolites as petroleum refining catalysts)

IT Borosilicates  
High-silica zeolites  
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
PREP (Preparation); USES (Uses)  
(SSZ-53; phenylcycloalkylmethyl ammonium cations as templates for  
synthesis of SSZ-53 zeolites as petroleum refining catalysts)

IT Zeolites (synthetic), uses  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)  
(SSZ-53; phenylcycloalkylmethyl ammonium cations as templates for  
synthesis of SSZ-53 zeolites as petroleum refining catalysts)

IT Aromatic hydrocarbons, reactions  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
(Process); RACT (Reactant or reagent)  
(alkylation of; phenylcycloalkylmethyl ammonium cations as templates  
for synthesis of SSZ-53 zeolites as petroleum refining catalysts)

IT Petroleum refining catalysts  
(alkylation, for arom. hydrocarbons; phenylcycloalkylmethyl ammonium

- cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT Group VIII elements  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT Petroleum cracking catalysts  
 Petroleum hydrotreating catalysts  
 (hydrocracking; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT Lubricating oils  
 (manuf. of, isomerization of basestocks in; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT Transalkylation catalysts  
 (petroleum refining; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT Petroleum refining catalysts  
 (transalkylation; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 77-57-6, Cyclopentanecarbonitrile, 1-phenyl- 2201-23-2, Cyclohexanecarbonitrile, 1-phenyl- 83706-50-7, Cyclopentanecarbonitrile, 1-(4-fluorophenyl)- 214262-89-2, Cyclopentanecarbonitrile, 1-(2-fluorophenyl)- 214262-90-5, Cyclopentanecarbonitrile, 1-(3-fluorophenyl)-  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (LiAlH<sub>4</sub> redn. of; in synthesis of phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 1303-86-2P, Boron oxide (B<sub>2</sub>O<sub>3</sub>), uses 1309-37-1P, Iron oxide (Fe<sub>2</sub>O<sub>3</sub>), uses 1310-53-8P, Germanium oxide (GeO<sub>2</sub>), uses 1312-43-2P, Indium oxide (In<sub>2</sub>O<sub>3</sub>) 1344-28-1P, Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), uses 7631-86-9P, Silica, uses 12024-21-4P, Gallium oxide (Ga<sub>2</sub>O<sub>3</sub>) 13463-67-7P, Titanium dioxide, uses  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (SSZ-53 zeolites contg.; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 71-43-2, Benzene, reactions 91-20-3D, Naphthalene, derivs. 100-41-4, Ethylbenzene, reactions 108-88-3, Toluene, reactions 1330-20-7, Xylene, reactions 28804-88-8, Dimethylnaphthalene  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (alkylation of; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ 53 zeolites as petroleum refining catalysts)
- IT 7440-48-4, Cobalt, uses 7440-50-8, Copper, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for NO<sub>x</sub> redn. in exhaust gases; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)

- IT 7440-06-4, Platinum, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 95-47-6, o-Xylene, reactions 108-38-3, reactions  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (isomerization of; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 106-42-3P, p-Xylene, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (manuf. of; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 11104-93-1, Nitrogen oxide (NOx), reactions  
 RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)  
 (redn. of, in exhaust gases; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 17380-54-0P, Cyclohexanemethanamine, 1-phenyl- 17511-89-6P, Cyclopentanemethanamine, 1-phenyl- 75180-50-6P, Cyclopentanemethanamine, 1-(4-fluorophenyl)- 359715-61-0P, Cyclopentanemethanamine, 1-(3-fluorophenyl)- 378247-87-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis and methylation of; in synthesis of phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 359715-65-4P, Cyclopentanemethanaminium, 1-(3-fluorophenyl)-N,N,N-trimethyl-, hydroxide 378247-83-7P 378247-84-8P 378247-85-9P 378247-86-0P  
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (template; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- IT 359715-60-9DP, Cyclopentanemethanaminium, 1-(3-fluorophenyl)-N,N,N-trimethyl-, salts 378247-79-1DP, salts 378247-80-4DP, salts 378247-81-5DP, salts 378247-82-6DP, salts  
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (templates; phenylcycloalkylmethyl ammonium cations as templates for synthesis of SSZ-53 zeolites as petroleum refining catalysts)
- REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER. 2000:881266 CAPLUS  
 DOCUMENT NUMBER: 134:44351  
 TITLE: Refrigerator lubricant composition  
 comprising an aliphatic substituted naphthalene with  
 carbon dioxide as refrigerant  
 INVENTOR(S): Tolfa, John C.; Rajewski, Thomas E.

PATENT ASSIGNEE(S): Lubrizol Corp., USA  
 SOURCE: PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000075265	A1	20001214	WO 2000-US13796	20000518
W: AU, CA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6267907	B1	20010731	US 1999-325136	19990603
EP 1192240	A1	20020403	EP 2000-937618	20000518
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1999-325136	A 19990603
			WO 2000-US13796	W 20000518

AB A **lubricant-refrigerant compn.** for a compression refrigeration system is disclosed which comprises (A) carbon dioxide refrigerant, and (B) a **lubricant** of an aliph. naphthalene. A supplemental **lubricant** comprising at least one alkyl benzene, a hydrocarbon, a polyalkylene glycol, a polyol ester or a polyvinyl ether may also be present. Addnl., a performance additive comprising an alkoxylated alc. or phenol, an alkoxylated glycol, an alkyl phenol or a phosphorus compd. may also be present.

IT 91-20-3D, Naphthalene, aliph. derivs., reactions  
 RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**  
 (refrigerator **lubricant compn.** comprising an aliph. substituted naphthalene with carbon dioxide as refrigerant)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



IC ICM C10M171-00  
 ICS C10M105-06; C10M169-04; C09K005-04; C10M169-04; C10M105-06;  
 C10M105-06; C10M105-38; C10M107-24; C10M107-34; C10M129-10;  
 C10M137-04; C10M137-10; C10M145-36; C10N020-00; C10N040-30

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

ST refrigerator **lubricant** substituted naphthalene

IT Alcohols, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (polyhydric, esters; refrigerator **lubricant compn.** comprising an aliph. substituted naphthalene with carbon dioxide as refrigerant)

- IT Esters, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (polyhydric; refrigerator **lubricant compn.**  
 comprising an aliph. substituted naphthalene with carbon dioxide as  
 refrigerant)
- IT **Lubricants**  
 Refrigerating apparatus  
 (refrigerator **lubricant compn.** comprising an aliph.  
 substituted naphthalene with carbon dioxide as refrigerant)
- IT Hydrocarbons, uses  
 Polyoxyalkylenes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (refrigerator **lubricant compn.** comprising an aliph.  
 substituted naphthalene with carbon dioxide as refrigerant)
- IT Carboxylic acids, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (refrigerator **lubricant compn.** comprising an aliph.  
 substituted naphthalene with carbon dioxide as refrigerant)
- IT 124-38-9, Carbon dioxide, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (refrigerant; refrigerator **lubricant compn.**  
 comprising an aliph. substituted naphthalene with carbon dioxide as  
 refrigerant)
- IT 71-43-2D, Benzene, alkyl derivs., uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (refrigerator **lubricant compn.** comprising an aliph.  
 substituted naphthalene with carbon dioxide as refrigerant)
- IT 50-70-4, Sorbitol, reactions 56-81-5, Glycerol, reactions 57-11-4,  
 Stearic acid, reactions 57-55-6, Propylene glycol, reactions 64-19-7,  
 Acetic acid, reactions 77-99-6, Trimethylolpropane 78-24-0, Tri  
 pentaerythritol 79-09-4, Propionic acid, reactions 88-09-5,  
 2-Ethylbutanoic acid 88-99-3, Phthalic acid, reactions 91-20-3D  
 , Naphthalene, aliph. derivs., reactions 107-21-1, Ethylene glycol,  
 reactions 107-88-0, 1,3-Butanediol 107-92-6, Butyric acid, reactions  
 109-52-4, Valeric acid, reactions 110-15-6, Succinic acid, reactions  
 110-16-7, Maleic acid, reactions 110-63-4, 1,4-Butanediol, reactions  
 111-14-8, Heptanoic acid 111-46-6, Di ethylene glycol, reactions  
 112-05-0, Nonanoic acid 112-27-6, Tri ethylene glycol 112-85-6,  
 Behenic acid 115-77-5, Mon o pentaerythritol, reactions 124-04-9,  
 Adipic acid, reactions 124-07-2, Octanoic acid, reactions 126-30-7,  
 Neopentyl glycol 126-58-9, Di pentaerythritol 128-37-0, BHT, reactions  
 142-62-1, Hexanoic acid, reactions 143-07-7, Lauric acid, reactions  
 144-19-4, 2,2,4-Trimethyl-1,3-pentanediol 149-57-5, 2-Ethylhexanoic acid  
 334-48-5, Decanoic acid 584-03-2, 1,2-Butanediol 1330-78-5, Tricresyl  
 phosphate 3302-10-1, 3,5,5-Trimethylhexanoic acid 4536-23-6, 2-Methyl  
 hexanoic acid 9002-93-1, Triton X-45 25013-16-5, BHA 25103-52-0,  
 Isooctanoic acid 25265-71 8, Di propylene glycol 25354-97-6, 2-Hexyl  
 decanoic acid 26896-18-4, Isononanoic acid 26896-20-8, Neodecanoic  
 acid 30399-84-9, Isostearic acid 33113 10-9, Neoheptanoic acid  
 36675-34-0, Hexaglycerol 56090-54-1, Tri glycerol 129291-65-2,  
 Irgalube TPPT 198840-84-5, MCP-917  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(refrigerator **lubricant compn.** comprising an aliph.  
substituted naphthalene with carbon dioxide as refrigerant)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:65631 CAPLUS

DOCUMENT NUMBER: 128:169667

TITLE: The **lubricating oil compositions**  
with superior hydrolytic stability

INVENTOR(S): Hachiya, Tetsuo; Takahashi, Takaaki; Imafuku, Takeji;  
Okuma, Naomichi

PATENT ASSIGNEE(S): Nippon Kokan Co., Ltd., Japan; Ado Chemco K. K.;  
Matsumura Oil Co., Ltd.; Taiyo Oil + Fat Mfg. Co.,  
Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10017880	A2	19980120	JP 1996-114494	19960509
			JP 1996-109853	19960430

PRIORITY APPLN. INFO.:

AB **Lubricating oil compns.** with improved hydrolytic  
stability, esp. suitable for rolling oils and cutting oils, contain  
required components of hydrocarbon-series synthetic oils 0.5-900 wt.  
parts, e.g., alkyl naphthalenes, alkylmethylnaphthalenes or  
poly- $\alpha$ -olefins, and base oils of animal and vegetable oils 100 wt.  
parts, e.g., palm oil, beef tallow, lard, castor oil, or their refined  
products.

IT 91-20-3, Naphthalene, reactions

RL: **RCT (Reactant)**; RACT (Reactant or reagent)  
(hydrocarbon oils from; **lubricating oil compns.**  
with superior hydrolytic stability)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



IC ICM C10M111 02

ICS C10M111-04; C10M111-02; C10M101-04; C10M105-06; C10M105-04;  
C10M107-04; C10N030-00; C10N040-22; C10N040-24

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)  
Section cross-reference(s): 55, 56

ST **lubricating oil compn** hydrolytic stability; rolling

KOROMA EIC1700

- cutting oil animal vegetable hydrocarbon
- IT Fats and Glyceridic oils, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(animal, base oil; **lubricating oil compns.** with superior hydrolytic stability)
- IT Lard  
Palm oil  
Tallow  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(base oil; **lubricating oil compns.** with superior hydrolytic stability)
- IT **Lubricating oils**  
(cutting oils; **lubricating oil compns.** with superior hydrolytic stability)
- IT **Lubricating oils**  
(**lubricating oil compns.** with superior hydrolytic stability)
- IT Polyolefins  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(**lubricating oil compns.** with superior hydrolytic stability)
- IT **Lubricating oils**  
(rolling oils; **lubricating oil compns.** with superior hydrolytic stability)
- IT Fats and Glyceridic oils, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(vegetable, base oil; **lubricating oil compns.** with superior hydrolytic stability)
- IT 91-20-3, Naphthalene, reactions 629-73-2, 1-Hexadecene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrocarbon oils from; **lubricating oil compns.** with superior hydrolytic stability)
- IT 56388-47-7P, Hexadecylnaphthalene  
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**lubricating oil compns.** with superior hydrolytic stability)
- IT 91-20-3D, Naphthalene, alkyl derivs., uses 203049-10-9  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(**lubricating oil compns.** with superior hydrolytic stability)

L24 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1997:701454 CAPLUS  
DOCUMENT NUMBER: 128:5615  
TITLE: Stable biodegradable **lubricant compositions**



INVENTOR(S): Lawate, Saurabh S.  
 PATENT ASSIGNEE(S): Lubrizol Corp., USA  
 SOURCE: U.S., 22 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5681797	A	19971028	US 1996-609571	19960229
PRIORITY APPLN. INFO.:			US 1996-609571	19960229

AB An oxidatively stable, biodegradable **lubricant compn.** is disclosed which comprises (A) a hydrogenated polyisoprene prepd. by polyimg. isoprene such that polyisoprene is obtained wherein there are from 4 to 1000 isoprene units and hydrogenating the polyisoprene to obtain a hydrogenated polyisoprene contg. a residual olefinic unsatn. of not >10% based upon the unsatn. Content prior to hydrogenation; and (B) at least one performance additive selected from the group consisting of (1) an alkyl phenol; (2) an ether; (3) a mono- or di-substituted glyceride; (4) a phosphorus deriv.; (5) a benzotriazole; (6) a phosphorus amine salt; (7) a trihydrocarbyl phosphorothionate; (8) an arom. amine; (9) a zinc salt; (10) a pour point depressant ester; (11) a hydrogenated block copolymer; and (12) an acrylate polymer. In addn. to components (A) and (B), the **compn.** may also contain (C) at least one oil selected from the group consisting of (1) a triglyceride oil; (2) a synthetic ester base oil; (3) a polyalphaolefin; and (4) a mineral oil.

IT 91-20-3, Naphthalene, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (stable biodegradable **lubricant compns.**)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)

IC ICM C10M141-00

NCL 508280000

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

ST biodegradable **lubricant** hydrogenated polyisoprene

IT Alcohols, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (C12-18; stable biodegradable **lubricant compns.**)

IT Isoprene rubber, uses  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
 (Reactant or reagent); USES (Uses)  
 (hydrogenated; stable biodegradable **lubricant compns.**  
 .)

- IT Naphthenic acids, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nickel salts; stable biodegradable lubricant compns.)
- IT Sunflower oil  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oleic acid-high; stable biodegradable lubricant compns.)
- IT Lubricants  
(stable biodegradable lubricant compns.)
- IT 9003-31-0  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(isoprene rubber, hydrogenated; stable biodegradable lubricant compns.)
- IT 78-67-1, Azobisisobutyronitrile 94-36-0, Benzoyl peroxide, uses  
RL: CAT (Catalyst use); USES (Uses)  
(stable biodegradable lubricant compns.)
- IT 67-63-0, Isopropanol, reactions 67-64-1, Acetone, reactions 71-41-0, Amyl alcohol, reactions 71-43-2, Benzene, reactions 75-56-9, Propylene oxide, reactions 78-79-5, Isoprene, reactions 78-83-1, Isobutanol, reactions 91-20-3, Naphthalene, reactions 96-33-3, Methyl acrylate 100-42-5, Styrene, reactions 103-11-7, 2-Ethylhexyl acrylate 105-30-6, 2-Methyl-1-pentanol 108-31-6, Maleic anhydride, reactions 108-88-3, Toluene, reactions 109-99-9, Tetrahydrofuran, reactions 110-54-3, Hexane, reactions 110-82-7, Cyclo hexane, reactions 123-00-2, 4-Morpholinepropanamine 137-32-6, 2-Methyl-1-butanol 142-90-5, Lauryl methacrylate 603-35-0, Triphenyl phosphine, reactions 1314-13-2, Zinc oxide, reactions 1314-80-3, Phosphorus pentasulfide 2455-24-5, Tetrahydrofurfuryl methacrylate 4813-57-4, Stearyl acrylate 7439-93-2, Lithium, reactions 7534-94-3, Isobornyl methacrylate 7664-93-9, Sulfuric acid, reactions 9003-31-0, Polyisoprene 9011-13-6, Maleic anhydride-styrene copolymer 12075-68-2, Ethylaluminum sesquichloride 13472-08-7, Vazo 67 15834-33-0, Phosphorodithioic acid, reactions 29964-84-9, Isodecyl methacrylate 48145-04-6, 2-Phenoxy ethyl acrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(stable biodegradable lubricant compns.)

L24 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:471534 CAPLUS

DOCUMENT NUMBER: 127:164158

TITLE: Hydrogenation of aromatics in diesel fuels on Pt/MCM-41 catalysts

AUTHOR(S): Corma, A.; Martinez, A.; Martinez-Soria, V.

CORPORATE SOURCE: Instituto de Tecnologia Quimica, UPV-CSIC, Universidad Politecnica de Valencia, Valencia, 46071, Spain

SOURCE: Journal of Catalysis (1997), 169(2), 480-489  
CODEN: JCTLA5; ISSN: 0021-9517

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hydrogenation activity of Pt supported on two mesoporous MCM-41 samples differing in their chem. **compn.** was studied by following the kinetics of naphthalene hydrogenation at 225-275.degree. and 5.0 MPa total pressure, and by comparing the kinetic parameters obtained with Pt supported on a mesoporous amorphous silica-alumina (MSA) and other conventional supports [e.g., com. amorphous silica-alumina (ASA), zeolite USY, .gamma.-alumina, and silica]. The mesoporous MCM-41 and MSA materials, which had very high surface areas, allowed for a better **dispersion** of the Pt particles, and they showed a superior overall hydrogenation activity as compared to the other supports. However, Pt/USY displayed the highest turnover (activity per exposed surface Pt), due to the interaction of small Pt aggregates in the supercage of the zeolite with the strong Bronsted acid sites assocd. to framework aluminum forming electron-deficient Pt species of known enhanced activity. Moreover, both the Al-MCM-41 and USY-based catalysts presented the highest sulfur tolerance during the hydrogenation of a naphthalene feed contg. 200 ppm sulfur, added as dibenzothiophene. The high metal **dispersion** and the interaction of the small Pt clusters with the mildly acidic sites present in Al-MCM-41 may account for its high sulfur tolerance. The superior hydrogenation activity and sulfur tolerance of Pt-MCM-41 catalyst obsd. in the naphthalene expts. were further confirmed during the hydrogenation of a hydrotreated light cycle oil (LCO) feed contg. .apprx.70 wt.% aroms. and 400 ppm sulfur.

IT 91-20-3, Naphthalene, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(model compd.; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



CC 51-9 (Fossil Fuels, Derivatives, and Related Products)

ST diesel fuel arom hydrogenation platinum; MCM41 zeolite platinum diesel hydrogenation; USY zeolite platinum diesel hydrogenation

IT Petroleum products

(cycle oils, hydrogenation of; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)

IT Diesel fuel

(hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)

IT Aromatic hydrocarbons, reactions

RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)

(hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)

IT Petroleum refining catalysts

- (hydrogenation; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT Ultrastable Y zeolites  
Zeolite MCM-41  
RL: CAT (Catalyst use); USES (Uses)  
(support; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT 119-64-2, Tetralin  
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)  
(formation and hydrogenation of; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT 493-01-6, cis-Decalin 493-02-7, trans-Decalin  
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)  
(formation of; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT 7440-06-4, Platinum, uses  
RL: CAT (Catalyst use); USES (Uses)  
(hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT 91-20-3, Naphthalene, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(model compd.; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)
- IT 1344-28-1, Alumina, uses 7631-86-9, Silica, uses  
RL: CAT (Catalyst use); USES (Uses)  
(support; hydrogenation of aroms. on platinum supported on mesoporous MCM-41 zeolites in manuf. of diesel fuels)

L24 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:379932 CAPLUS  
DOCUMENT NUMBER: 125:37859  
TITLE: Method for tagging **petroleum** products  
INVENTOR(S): Krutak, James John; Cushman, Michael Roy; Weaver, Max Allen  
PATENT ASSIGNEE(S): Eastman Chemical Company, USA  
SOURCE: PCT Int. Appl., 87 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9610620	A1	19960411	WO 1995-US12191	19950925
W: BR, CA, CN, HU, JP, KR, MX, NO, PL, RU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5525516	A	19960611	US 1994-315386	19940930
US 5525516	B1	19991109		
ZA 9508247	A	19960424	ZA 1995-8247	19950929
PRIORITY APPLN. INFO.:			US 1994-315386	19940930

OTHER SOURCE(S): MARPAT 125:37859

AB This invention provides a method for imparting invisible markings for identification purposes to **petroleum** hydrocarbons by incorporating one or more IR fluorescing compds. therein. Certain IR fluorophores from the classes of squaraines (derived from squaric acid), phthalocyanines and naphthalocyanines are useful in providing invisibly marked **petroleum** hydrocarbons such as crude oil, lubricating oils, waxes, gas oil (furnace oil), diesel oil, kerosine and in particular gasoline. The near IR fluorophores are added to the hydrocarbons at extremely low levels and are detected by exposing the marked hydrocarbon **compns** to near IR radiation having a wavelength in the 670-850 nm range and then detecting the emitted fluorescent light via near IR light detection means.

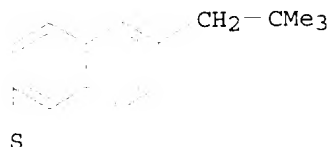
IT 177992-80-2P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(marker; method for tagging **petroleum** products by near IR fluorophore)

RN 177992-80-2 CAPLUS

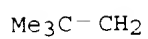
CN Silicon, bis(acetato-O) [2,11,20,29-tetrakis[[6-(2,2-dimethylpropyl)-2-naphthalenyl]thio]-37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-1:2''',3'''-q]porphyrazinato(2-)-N37,N38,N39,N40]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-B

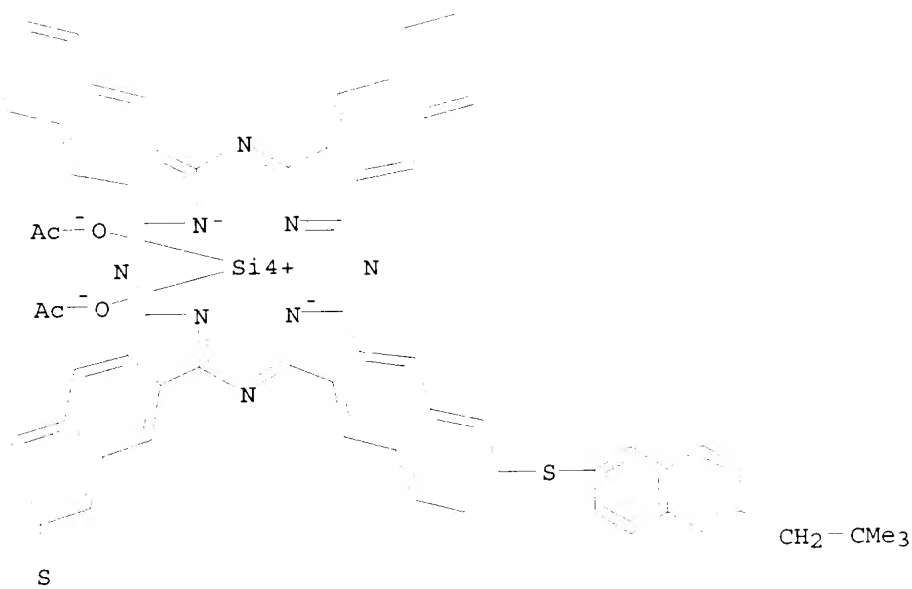


PAGE 2-A

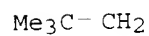
S



PAGE 2-B



PAGE 3-A



PAGE 3-B

IC ICM C10L001-00  
ICS C10M171-00; C10L001-22; C10L001-30; C10L001-28; C10L001-24

CC 51-7 (**Fossil Fuels**, Derivatives, and Related Products)  
Section cross-reference(s): 24, 41, 74

ST tagging **petroleum** product; marker **petroleum** product  
squaraine compd; phthalocyanine fluorophore **petroleum** product  
tagging; naphthalocyanine fluorophore **petroleum** product tagging  
NIR; gasoline tagging NIR fluorophore squaraine

IT **Fuel oil**  
    **Fuels**, diesel  
    **Gas oils**  
        **Lubricating oils**  
        **Petroleum** products  
            (method for tagging **petroleum** products by near IR  
            fluorophore)

IT Gasoline  
Kerosine  
RL: AMX (Analytical matrix); NUU (Other use, unclassified); ANST  
(Analytical study); USES (Uses)  
    (method for tagging **petroleum** products by near IR  
    fluorophore)

IT Fluorescent substances  
    (near IR; method for tagging **petroleum** products with)

IT Marking  
    (agents, method for tagging **petroleum** products by near IR  
    fluorophore)

IT 123466-48-8P, 5-Phenoxy-1.3-diiminoisoindoline  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
    (in prepn. of tagging compds. for **petroleum** products by near  
    IR fluorophore)

IT 76-05-1, reactions 99-76-3, Methyl 4-hydroxybenzoate 104-76-7,  
2-Ethylhexanol 119-64-2, 1,2,3,4-Tetrahydronaphthalene 488-86-8,  
Croconic acid 768-33-2, Chlorodimethylphenylsilane 1985-37-1  
2892-51-5, Squaric acid 7446-70-0, Aluminum chloride, reactions  
7664-41-7, Ammonia, reactions 10026-04-7, Silicon tetrachloride  
13036-02-7, Dimethyl 5-hydroxyisophthalate 14154-42 8, Aluminum  
phthalocyanine chloride 19333-10-9 32703-82-5 33273-14 2  
37622-95-0 38791-62-7 51762-67-5 51762-68-6 75942-37-9  
77474-62-5 77474-63-6 92396-91-3 159454-81-6 167093-09-6  
167093-17-6 177993-61-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
    (in prepn. of tagging compds. for **petroleum** products by near  
    IR fluorophore)

IT 39049-43-9P 58687-99-3P 101367-23-1P 104493-98-3P 116453-73-7P  
116453-79-3P 118401-81-3P 131370-71-3P 131370-72-4P 154587-93-6P  
154755-41-6P 154755-44-9P 154755-48-3P 154755 50-7P 154787-50-5P  
155469-92-4P 155613-94-8P 155613-95-9P 157410-43-0P 167093-10-9P  
167093-12-1P 167093-15-4P 167093-16-5P 167093-18-7P 167093 19-8P  
167093-20-1P 167093-21-2P 167093-22-3P 167093-23-4P 167093-24-5P  
167093-25-6P 167093-26-7P 173775-37-6P 177991-92-3P 177991-93-4P  
177991-94-5P 177991-95-6P 177991-96-7P 177991-97-8P 177991-98-9P

177991-99-0P	177992-00-6P	177992-01-7P	177992-02-8P	177992-03-9P
177992-04-0P	177992-05-1P	177992-06-2P	177992-07-3P	177992-08-4P
177992-09-5P	177992-10-8P	177992-11-9P	177992-12-0P	177992-13-1P
177992-14-2P	177992-15-3P	177992-16-4P	177992-17-5P	177992-18-6P
177992-19-7P	177992-20-0P	177992-21-1P	177992-22-2P	177992-23-3P
177992-24-4P	177992-25-5P	177992-26-6P	177992-27-7P	177992-28-8P
177992-29-9P	177992-30-2P	177992-31-3P	177992-32-4P	177992-33-5P
177992-34-6P	177992-35-7P	177992-36-8P	177992-37-9P	177992-38-0P
177992-39-1P	177992-40-4P	177992-41-5P	177992-42-6P	177992-43-7P
177992-44-8P	177992-45-9P	177992-46-0P	177992-47-1P	177992-48-2P
177992-49-3P	177992-50-6P	177992-51-7P	177992-52-8P	177992-53-9P
177992-54-0P	177992-55-1P	177992-56-2P	177992-57-3P	177992-58-4P
177992-59-5P	177992-60-8P	177992-61-9P	177992-62-0P	177992-63-1P
177992-64-2P	177992-65-3P	177992-66-4P	177992-67-5P	177992-68-6P
177992-69-7P	177992-70-0P	177992-71-1P	177992-72-2P	177992-73-3P
177992-74-4P	177992-75-5P	177992-76-6P	177992-77-7P	177992-78-8P
177992-79-9P	177992-80-2P	177992-81-3P	177992-82-4P	
177992-83-5P	177992-84-6P	177992-85-7P	177992-86-8P	177992-87-9P
177992-88-0P	177992-89-1P	177992-90-4P	177992-91-5P	177992-92-6P
177992-93-7P	177992-94-8P	177992-95-9P	177992-96-0P	177992-97-1P
177992-98-2P	177992-99-3P	177993-00-9P	177993-01-0P	177993-02-1P
177993-03-2P	177993-04-3P	177993-05-4P	177993-06-5P	177993-07-6P
177993-08-7P	177993-09-8P	177993-10-1P	177993-11-2P	177993-12-3P
177993-13-4P	177993-14-5P	177993-15-6P	177993-16-7P	177993-17-8P
177993-18-9P	177993-19-0P	177993-20-3P	177993-21-4P	177993-22-5P
177993-23-6P	177993-24-7P	177993-25-8P	177993-26-9P	177993-27-0P
177993-28-1P	177993-29-2P	177993-30-5P	177993-31-6P	177993-32-7P
177993-33-8P	177993-34-9P	177993-35-0P	177993-36-1P	177993-37-2P
177993-38-3P	177993-39-4P	177993-40-7P	177993-41-8P	177993-42-9P
177993-43-0P	177993-44-1P	177993-45-2P	177993-46-3P	177993-47-4P
177993-48-5P	177993-49-6P	177993-50-9P	177993-51-0P	177993-52-1P
177993-53-2P	177993-54-3P	177993-55-4P	177993-56-5P	177993-57-6P
177993-58-7P	177993-59-8P	177993-60-1P	178066-94-9P	178066-95-0P
178066-96-1P	178066-97-2P	178066-98-3P	178066-99-4P	178067-00-0P
178067-01-1P	178067-02-2P	178067-03-3P	178067-04-4P	178067-05-5P
178067-06-6P	178067-07-7P	178067-08-8P	178067-09-9P	178067-10-2P
178067-11-3P	178067-12-4P	178067-13-5P	178067-14-6P	178067-15-7P
178067-16-8P	178067-17-9P	178067-18-0P	178067-19-1P	178067-20-4P
178067-21-5P	178067-22-6P	178067-23-7P	178067-24-8P	178067-25-9P
178067-26-0P	178067-27-1P	178067-28-2P		

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(marker; method for tagging petroleum products by near IR fluorophore)

IT	178067-29-3P	178067-30-6P	178067-31-7P	178067-32-8P	178067-33-9P
	178067-34-0P	178067-35-1P	178067-36-2P	178067-37-3P	178067-38-4P
	178067-39-5P	178067-40-8P	178067-41-9P	178067-42-0P	178067-43-1P
	178067-45-3P	178067-46-4P	178067-47-5P	178067-48-6P	178067-49-7P
	178067-50-0P	178067-51-1P	178067-52-2P	178067-53-3P	178067-54-4P
	178067-55-5P	178067-56-6P	178067-57-7P	178067-58-8P	178067-59-9P
	178067-60-2P	178067-61-3P	178067-62-4P	178067-63-5P	178067-64-6P
	178067-69-1P	178067-70-4P	178067-71-5P	178067-72-6P	178121-41-0P



178121-42-1P 178121-43-2P 178121-44-3P 178121-45-4P 178121-47-6P  
178183-20-5P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(marker; method for tagging **petroleum** products by near IR fluorophore)

IT 177993-62-3P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(prepn. of tagging compds. for **petroleum** products by near IR fluorophore)

L24 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:81444 CAPLUS

DOCUMENT NUMBER: 122:85148

TITLE: Bisnaphthol as an antioxidant and anticorrosion additive for motor oils

AUTHOR(S): Akhmedova, R. A.; Sadykhov, A. M.

CORPORATE SOURCE: AzNIPIneft, Azerbaijan

SOURCE: Azerbaidzhanskoe Neftyanoe Khozyaistvo (1992), (5), 59-60

CODEN: AZNKAY; ISSN: 0365-8554

PUBLISHER: Azerbaidzhanskoe Neftyanoe Khozyaistvo

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Use of bisnaphthol-2,2-propane (I) as an antioxidant and corrosion inhibitor for **lubricating** oils was investigated by using std. tests. At 200.degree., oil samples with I addn. were stable, and no deposits were formed during 50 h.

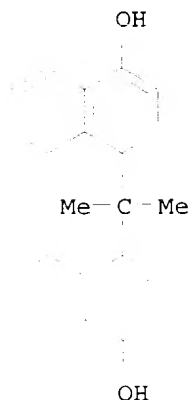
IT 37394-14-2

RL: MOA (Modifier or additive use); USES (Uses)

(as antioxidant and anticorrosion additive for motor oils)

RN 37394-14-2 CAPLUS

CN 1-Naphthalenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)



CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

KOROMA EIC1700

ST bisnaphthol **lubricating** oil additive  
 IT **Lubricating** oil additives  
 (antioxidants-corrosion inhibitors, bisnaphthol deriv. as)  
 IT **37394-14-2**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (as antioxidant and anticorrosion additive for motor oils)

L24 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1990:594722 CAPLUS  
 DOCUMENT NUMBER: 113:194722  
 TITLE: Alkylaromatic **lubricant** fluids  
 INVENTOR(S): Forbus, Thomas Reginald; Ho, Suzzy Chen Hsi; Pelrine,  
 Bruce Patrick; Wu, Margaret May Som  
 PATENT ASSIGNEE(S): Mobil Oil Corp., USA  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 377305	A1	19900711	EP 1989-313382	19891220
EP 377305	B1	20000607		
R: AT, BE, DE, ES, FR, GB, IT, NL, SE				
US 5171915	A	19921215	US 1989-312277	19890221
CA 2005940	AA	19900706	CA 1989-2005940	19891219
CA 2005940	C	20010515		
AT 193722	E	20000615	AT 1989-313382	19891220
ES 2146573	T3	20000816	ES 1989-313382	19891220
FI 9000078	A	19900707	FI 1990-78	19900105
FI 97624	B	19961015		
FI 97624	C	19970127		
AU 9047729	A1	19900712	AU 1990-47729	19900105
AU 626625	B2	19920806		
JP 02238093	A2	19900920	JP 1990-145	19900105
JP 2929210	B2	19990803		
US 5144082	A	19920901	US 1991-686459	19910417
PRIORITY APPLN. INFO.:			US 1989-293911 A	19890106
			US 1989-312277 A	19890221

AB Arom. compds. are alkylated with C20-1300 olefinic oligomers by contacting the oligomers and arom. compds. with an acidic catalyst to produce alkylated arom. hydrocarbon **compns.** useful as **lubricant** basestock and additives. The olefinic oligomers used as alkylating agents are prep'd. from 1-alkene oligomerization in contact with a reduced Cr oxide catalyst on SiO2 support. In one embodiment, the arom. compds. are alkylated with a mono-olefinic HVI-PAO (high viscosity index-poly-.alpha.-olefin) dimer which is prep'd. as a product or byproduct from 1-alkene oligomerization using reduced Cr oxide on solid support. The alkylated arom. hydrocarbons retain the unique features of the alkylating olefinic oligomer and exhibit high viscosity index and low pour

point. The alkylarom. **compns.** show improved thermal stability;  
also, the **compns.** are useful as **lubricant** additives  
for improved antiwear properties, antioxidant and other properties.

IT 91-20-3D, Naphthalene, alkyl and aryl-substituted derivs.  
RL: **RCT (Reactant)**; **RAC** (Reactant or reagent)  
(alkylation of, with olefinic C20-1300 oligomers, for **lubricant**  
basestocks or additives)

RN 91-20-3 CAPLUS

CN Naphthalene (8CI, 9CI) (CA INDEX NAME)

IC ICM C10M105-06  
ICS C10G069-12; C10G071-04; C07C002-64; C07C015-20

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

ST alkylarom **lubricant** prepn; arom olefinic oligomer alkylation  
**lubricant**

IT **Lubricants**  
Lubricating grease additives  
Lubricating oil additives  
(alkyl aroms., prepn. of, by alkylation of aroms. with olefinic  
C20-1300 hydrocarbons)

IT Aluminosilicates, uses and miscellaneous  
Lewis acids  
RL: **CAT** (Catalyst use); **USES** (Uses)  
(catalysts, for alkylation of aroms. with olefinic oligomers, for  
**lubricant** basestocks or additives)

IT Petroleum refining  
(oligomerization-alkylation, for alkylarom. prepn., for  
**lubricants** or additives)

IT Zeolites, uses and miscellaneous  
RL: **CAT** (Catalyst use); **USES** (Uses)  
(HZSM 5, catalysts, for alkylation of aroms. with olefinic oligomers,  
for **lubricant** basestocks or additives)

IT Zeolites, uses and miscellaneous  
RL: **CAT** (Catalyst use); **USES** (Uses)  
(Y, catalysts, for alkylation of aroms. with olefinic oligomers, for  
**lubricant** basestocks or additives)

IT 87-65-0, 2,6-Dichlorophenol 88-75-5, 2-Nitrophenol 90-05-1,  
2-Methoxyphenol 95-57-8, 2-Chlorophenol 100-02-7, 4-Nitrophenol,  
reactions 103-90-2, 4-Acetamidophenol 106-48-9, 4-Chlorophenol  
108-95-2D, Phenol, carboalkoxy derivs. 120-83-2, 2,4-Dichlorophenol  
128-39-2, 2,6-Di-tert-butylphenol 150-76-5, 4-Methoxyphenol 576-26-1,  
2,6-Dimethylphenol 614-80-2, 2-Acetamidophenol  
RL: **RCT** (Reactant); **RAC** (Reactant or reagent)  
(alkylation of, with monoolefinic C12-40 hydrocarbons, for  
**lubricant** basestocks or additives)

IT 62-53-3, Aniline, reactions 71-43-2, Benzene, reactions 90-15-3,

1-Hydroxynaphthalene 91-20-3D, Naphthalene, alkyl and aryl-substituted derivs. 92-52-4, Biphenyl, reactions 93-89-0, Ethylbenzoate 95-47-6, o-Xylene, reactions 95-63-6, Pseudocumene 98-06-6, tert-Butylbenzene 98-82-8, Cumene 98-95-3, Nitrobenzene, reactions 99-87-6, p-Cymene 100-41-4, Ethylbenzene, reactions 100-66-3, Anisole, reactions 101-81-5, Diphenylmethane 101-84-8, Diphenyl ether 102-09-0, Diphenylcarbonate 103-29-7, 1,2-Diphenylethane 103-65-1, n-Propylbenzene 103-84-4, Acetanilide 104-51-8, n-Butylbenzene 106-42-3, p-Xylene, reactions 108-38-3, m-Xylene, reactions 108-88-3, Toluene, reactions 108-90-7, Chlorobenzene, reactions 108-95-2, Phenol, reactions 108-98-5, Thiophenol, reactions 120-12-7D, Anthracene, alkyl and aryl-substituted derivs. 120-80-9, Catechol, reactions 135-19-3, 2-Hydroxynaphthalene, reactions 135-98-8, sec-Butylbenzene 139-66-2, Diphenylsulfide 519-73-3, Triphenylmethane 526-73-8, Hemimellitene 538-93-2, Isobutylbenzene 610-50-4, 1-Hydroxyanthracene 613-14-9, 2-Hydroxyanthracene

RL: **RCT (Reactant)**; RACT (Reactant or reagent)

(alkylation of, with olefinic C20-1300 oligomers, for **lubricant** basestocks or additives)

IT 1335-30-4

RL: **USES (Uses)**

(aluminosilicates, catalysts, for alkylation of aroms. with olefinic oligomers, for **lubricant** basestocks or additives)

IT 1314-80-3, Phosphorus pentasulfide 7446-11-9, Sulfur trioxide, uses and miscellaneous 7446-70-0, Aluminum trichloride, uses and miscellaneous 7550-45-0, Titanium tetrachloride, uses and miscellaneous 7637-07-2, Boron trifluoride, uses and miscellaneous 7646-78-8, Tin tetrachloride, uses and miscellaneous 7646-85-7, Zinc dichloride, uses and miscellaneous 7647-01-0, Hydrochloric acid, uses and miscellaneous 7647-18-9, Antimony pentachloride 7664-38-2, Phosphoric acid, uses and miscellaneous 7664-39-3, Hydrofluoric acid, uses and miscellaneous 7664-93-9, Sulfuric acid, uses and miscellaneous 7705-08-0, Iron trichloride, uses and miscellaneous 10035-10-6, Hydrobromic acid, uses and miscellaneous

RL: **CAT (Catalyst use)**; **USES (Uses)**

(catalyst, for alkylation of aroms. with olefinic oligomers, for **lubricant** basestocks or additives)

IT 11118-57-3, Chromium oxide

RL: **USES (Uses)**

(catalysts contg. carbon monoxide-reduced, on silica, for oligomerization of C2-201-alkenes, in prepn. of olefinic oligomers for arom. alkylation, for **lubricant** basestocks or additives)

IT 128-39-2DP, alkylation products with C20 olefins

RL: **PREP (Preparation)**

(**lubricants** or additives, prepn. of)

IT 1335-30-4

RL: **USES (Uses)**

(zeolites, HZSM 5, catalysts, for alkylation of aroms. with olefinic oligomers, for **lubricant** basestocks or additives)

IT 1335-30-4

RL: **USES (Uses)**

(zeolites, Y, catalysts, for alkylation of aroms. with olefinic oligomers, for **lubricant** basestocks or additives)

L24 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1977:587068 CAPLUS

DOCUMENT NUMBER: 87:187068

TITLE: **Composition** useful as pour point depressant and filter aid

INVENTOR(S): Faeder, Walter; Hoertzsch, Wolfgang; Uhlig, Heinz

PATENT ASSIGNEE(S): Ger. Dem. Rep.

SOURCE: Ger. (East), 3 pp.

CODEN: GEXXA8

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 121631	Z	19760812	DD 1975-187186	19750709
PRIORITY APPLN. INFO.:			DD 1975-187186	19750709
AB The title additive for paraffinic <b>lubricating</b> oils was prep'd. by alkylation of C <sub>10</sub> H <sub>8</sub> [91-20-3] with chloro paraffins (14-18% Cl; from wax of f.p. 52-6.degree.) over a catalyst contg. Al alloy and AlCl <sub>3</sub> at 20-90.degree. for 2 h.				
IT 91-20-3, reactions				
RL: <b>RCT (Reactant)</b> ; RACT (Reactant or reagent) (alkylation of, with chlorinated waxes)				
RN 91-20-3 CAPLUS				
CN Naphthalene (8CI, 9CI) (CA INDEX NAME)				



IC C07C003-56

CC 51-7 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 26

ST **lubricating** oil pour point depressant; naphthalene alkylation  
chloro paraffin; aluminum chloride catalyst alkylation

IT Alkylation  
(of naphthalenes by chlorinated wax)

IT Alkanes, compounds  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chloro, alkylation by, of naphthalene)

IT **Lubricating** oil additives  
(pour-point depressants, naphthalene wax alkyl derivs., manuf. of)

IT Aluminum alloy, base  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, contg. aluminum chloride, for alkylation of naphthalene)

with chlorinated waxes)  
 IT 91-20-3, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkylation of, with chlorinated waxes)  
 IT 7446-70-0, uses and miscellaneous  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, contg. of aluminum alloy, for alkylation of naphthalene  
 with chlorinated waxes)  
 IT 91-20-3DP, wax-alkyl derivs.  
 RL: PREP (Preparation)  
 (pour-point depressants, manuf. of)

L24 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1977:470559 CAPLUS

DOCUMENT NUMBER: 87:70559

TITLE: Evaluation of the antioxidant effectiveness of  
 alkylnaphthol derivatives by a chemiluminescence  
 method

AUTHOR(S): Orudzheva, I. M.; Guseinov, M. M.; Muganlinskii, F.  
 F.; Luka, M.; Liksha, V. B.; Suleimanova, L. G.

CORPORATE SOURCE: Azerb. Inst. Nefti Khim. im. Azizbekova, Baku, USSR

SOURCE: Izvestiya Vysshikh Uchebnykh Zavedenii, Neft i Gaz  
 (1976), 19(12), 51-2

CODEN: IVUNA2; ISSN: 0445-0108

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The evaluation was based on the detn. of chemiluminescence intensity in  
 the oil with and without inhibitors. Inhibitors 4-hexyl-1-naphthol (I)  
 [61351-09-5], 4-octyl-1-naphthol [61351-10-8], 2,2'-thiobis(4-hexyl-1-  
 naphthol) (II) [61351-12-0], and 2,2'-dithiobis(4-hexyl-1-  
 naphthol) (III) [61351-13-1] were tested comparatively with  
 Ionol at 0.1-1% addn. to paraffin oil. I had higher antioxidn. efficiency  
 than Ionol. II and III surpassed Ionol by both chemiluminescence and O  
 absorption. The antioxidn. efficiency of alkylnaphthols was increased by  
 the addn. of S atoms.

IT 61351-12-0 61351-13-1

RL: USES (Uses)  
 (antioxidants, for hydrocarbon oils)

RN 61351-12-0 CAPLUS

CN 1-Naphthalenol, 2,2'-thiobis[4-hexyl- (9CI) (CA INDEX NAME)

(CH<sub>2</sub>)<sub>5</sub>-Me

OH

—S—

OH

Me-(CH<sub>2</sub>)<sub>5</sub>

RN 61351-13-1 CAPLUS  
 CN 1-Naphthalenol, 2,2'-dithiobis[4-hexyl- (9CI) (CA INDEX NAME)

(CH<sub>2</sub>)<sub>5</sub> Me

OH

S-S

OH

Me-(CH<sub>2</sub>)<sub>5</sub>

CC 51-7 (Fossil Fuels, Derivatives, and Related Products)  
 ST hydrocarbon oil antioxidant alkyl naphthol deriv  
 IT Hydrocarbon oils  
 RL: USES (Uses)  
 (antioxidants for, alkyl naphthol derivs. as)  
 IT **Lubricating** oil additives  
 (antioxidants, alkyl naphthol derivs. as)  
 IT 61351-09-5 61351-10-8 **61351-12-0 61351-13-1**  
 RL: USES (Uses)  
 (antioxidants, for hydrocarbon oils)

L24 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1976:154099 CAPLUS  
 DOCUMENT NUMBER: 84:154099  
 TITLE: Corrosion inhibitor **composition**  
 INVENTOR(S): Brown, Louis H.; Swidler, Ronald  
 PATENT ASSIGNEE(S): Tallow Co., USA  
 SOURCE: U.S., 7 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3899535	A	19750812	US 1973-403337	19731003
PRIORITY APPLN. INFO.:			US 1961-111495	19610522
			US 1965-504217	19651023

AB The corrosion inhibitors are amines having the formula  
 Me(CH<sub>2</sub>)<sub>x</sub>CH(R)(CH<sub>2</sub>)<sub>y</sub>CH<sub>2</sub>NH<sub>2</sub>, in which y is ≥3, x + y = 15, and R is an aryl  
 group. They are prepd. by alkylation of arom. compds. with unsatd. fatty  
 acids and converting the acid to an amine. For example, oleic acid  
 [112-80-1] and naphthalene [91-20-3] gave 9-naphthalenestearic acid, which  
 was reacted with SOCl<sub>2</sub> [7719-09-7] and P<sub>2</sub>O<sub>5</sub>. The product was treated and  
 distd. to give naphthylstearonitrile, which was converted into an oxalate,

slurried with 10% NaOH, and further treated and distd. to give naphthylstearylamine (I). Phenylstearylamine (II) [25417-58-7], anisolestearylamine [57967-90-5], and tolylstearylamine [51019-10-4] were similarly prepd. These compds. were evaluated by coating steel [12597-69-2] panels with 25- and 50-ppm solns. in CH<sub>2</sub>Cl<sub>2</sub> and holding at 105.degree.F and 100% relative humidity for 5 days. The I and the other amines were superior to several com. amine-type inhibitors. In a std. corrosion test with 200 g 10% aq. HCl and 200 g of a C<sub>6</sub>H<sub>6</sub> soln. contg. 50 ppm of inhibitor, the redns. in wt. loss of a steel panel for II, oleylamine [112-90-3], octadecylamine [124-30-1], .beta.-methylphenethylamine [582-22-9], and 10-methyl-10-phenyldecylamine [57872-19-2] were 56, 45, 39, 24, and 19%, resp. Certain amines and diamines derived from I improve the adhesion of bitumen binders to aggregate surfaces. Thus, 30% asphalt (85-100 penetration), 30% diesel fuel, and 40% H<sub>2</sub>O was mixed with 2 wt.% I contg. 2-3% N,N,N-trimethyl-N-phenylstearylammmonium chloride (III) [25497-35-2] or N,N,N,N',N'-pentamethyl-N,N'-trimethylene-N'-phenylstearyldiammonium dichloride (IV) [26316-31-4] emulsifying agent, and adhesion and resistance to removal by water were detd. by std. tests. I-III mixts. gave 80 and 90% water-removal resistance and adhesion, resp., compared with 30 and 50% for control tests. II-IV mixts. gave 75 and 85%, resp. Ten other **compns.** gave results of 80-97 and 85-99%, resp. Completion fluids for water-injection petroleum recovery were similarly evaluated, giving 80-98 and 82-98% values compared with 25% for the control. Best results were obtained with N-phenylstearyltrimethylenediamine (V) [25897-00-1] and IV. A petroleum resin (Picco 100)-solvent formulation, a microcryst. wax formulation, and an asphalt-neoprene latex formulation, each contg. 2% IV and 2, 1, and 1%, resp., of V, all useful as drilling fluids, showed the value of V in the 2 tests. Phenylstearic acid soaps and derivs. were evaluated as emulsifiers by adding water to the oil at 60.degree. and mixing. The data show that phenylstearylduomeen is more effective than Duomeen T and that the most effective emulsifier is II.

IT 91-20-3, reactions  
 RL: **RCT (Reactant)**; RACT (Reactant or reagent)  
 (with oleic acid)  
 RN 91-20-3 CAPLUS  
 CN Naphthalene (8CI, 9CI) (CA INDEX NAME)



IC C07C  
 NCL 260570800R  
 CC 55 2 (Ferrous Metals and Alloys)  
 Section cross-reference(s): 51  
 ST corrosion inhibitor amine; emulsifying agent amine; asphalt emulsion  
 adhesion agent; drilling fluid amine additive; amine adhesion emulsifier  
 corrosion inhibitor  
 IT Petroleum wells



(completion and drilling fluids for, stearylamine additives for)

IT Fuels, diesel  
(drilling fluids, contg. asphalt, adhesion agents and emulsifiers for)

IT Asphalt  
RL: USES (Uses)  
(drilling fluids, contg. diesel fuel or neoprene latex, adhesion agents and emulsifiers for)

IT Coating materials  
(for aggregates for paving and structures, phenylstearylamine derivs.)

IT Binding materials  
(for bituminous **dispersions** or emulsions, stearylamine derivs.)

IT Rubber, neoprene, uses and miscellaneous  
(in drilling fluid, contg. asphalt and N-phenylstearyltrimethylenediamine oleate)

IT Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous  
RL: USES (Uses)  
(microcryst., drilling fluids, contg. N-phenylstearylendiamine oleate)

IT Resins  
RL: USES (Uses)  
(petroleum, in drilling fluids, contg. N-phenylstearyltrimethylenediamine oleate)

IT Emulsifying agents  
(phenylstearic acid derivs. and soaps)

IT Fatty acids, uses and miscellaneous  
RL: USES (Uses)  
(tall-oil, salts with N-phenylstearyltrimethylenediamine, adhesion agents for bituminous binders and completion and drilling fluids for petroleum wells)

IT 1,3-Propanediamine, N-(phenyloctadecyl)-, salt with tall oil fatty acids  
RL: USES (Uses)  
(adhesion agent, for bituminous binders and completion and drilling fluids for petroleum wells)

IT 29383-36-6  
RL: USES (Uses)  
(adhesion agent for bituminous binders and completion and drilling fluids for petroleum wells)

IT 25897-00-1 25897-15-8 29383-34-4 29383-35-5 58072-27-8  
RL: USES (Uses)  
(adhesion agent, for bituminous binders and completion and drilling fluids for petroleum wells)

IT 29383-37-7 29383-38-8  
RL: USES (Uses)  
(adhesion agents for bituminous binders and completion and drilling fluids for petroleum wells)

IT 25897-00-1  
RL: USES (Uses)  
(adhesion agents, for binders for bitumens and drilling fluids)

IT 112-90-3 124-30-1 582-22-9 57872-19-2  
RL: USES (Uses)  
(corrosion inhibitors, for steel)

- IT 12597-69-2, reactions  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(corrosion of, amines as corrosion inhibitors for)
- IT 26316-31-4  
RL: USES (Uses)  
(emulsifier, for binders for bitumens and drilling fluids)
- IT 25497-35-2  
RL: USES (Uses)  
(emulsifiers, for binders for bitumens and drilling fluids)
- IT 28013-20-9P 28013-23-2P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from naphthalene and oleic acid, and reaction with  
thionyl chloride)
- IT 26949-93-9P 26969-24-4P  
RL: PREP (Preparation)  
(prepn. and conversion to naphthylstearylamine)
- IT 25417-58-7P 26949-90-6P 26949-94-0P 51019-10-4P 57967-90-5P  
RL: PREP (Preparation)  
(prepn. of, for binders and corrosion inhibitors and drilling fluids)
- IT 7719-09-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with 9 (and 10)-naphthalenestearic acid,  
naphthylstearonitryl prep. by)
- IT 112-80-1, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with naphthalene)
- IT 91-20-3, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with oleic acid)

L24 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1968:4761 CAPLUS

DOCUMENT NUMBER: 68:4761

TITLE: Catalytic hydrogenation of coal-tar quinolines

AUTHOR(S): Neiser, Jan

CORPORATE SOURCE: Vychodoslovenske Zeleziarne, Kosice, Czech.

SOURCE: Ropa a Uhlie (1967), 9(6-7), 191-5

CODEN: ROUHAY; ISSN: 0035-8231

DOCUMENT TYPE: Journal

LANGUAGE: Slovak

AB Hydrogenation of crude coal-tar quinolines over an Adkins catalyst and particularly WS<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> gave a considerable yield of 1,2,3,4-tetrahydroquinoline (I), which is suitable for the manuf. of pesticides, vulcanization accelerators, and **lubricant** additives (CA 64: 696a). The required crude quinoline fraction (d<sub>20</sub> 1.0750, b. 235-40.degree.) was obtained by extg. the wash oil with 30% H<sub>2</sub>SO<sub>4</sub> followed by rectification of the bases by using a column of 35 theoretical plates. The quinoline fraction obtained contained 95.1% quinoline (II), 3.7% isoquinoline (III), 1.2% 8-methylquinoline, and a little quinaldine, alkylpyridines, and neutral oils. The anal. control was effected by gas-liquid chromatog. (neither the titrn. with HClO<sub>4</sub> in AcOH nor ir spectroscopy gives the required sepn.), by use of 10% by wt. diglycerol on

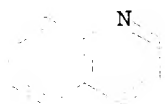
Celite (0.10-0.12 mm.) in a column 4 mm. times 120 cm. at 100.degree., with an Ar ionization detector; good sepn. of all components was achieved. The following specific retention vols. were obtained: I 0.58; II 1.00; III 1.44; 2-methylquinoline (quinaldine) (IV), 0.85; 4-methylquinoline, 2.11; 7-methylquinoline, 1.48; 8-methylquinoline, 0.38; 2,4-dimethylquinoline, 1.80; 2,6-dimethylquinoline, 1.20; 2,8-dimethylquinoline, 0.19; 1-methylisoquinoline, 1.51; 3-methylisoquinoline, 1.12; indole, 3.56. Hydrogenation over an Adkins catalyst (5% by wt.) was performed at 190-240.degree. and an initial H pressure of .gtoreq.100 kg./cm.2 After 45 min. at 213.degree., the product contained 59.58% I, 30.65% II, and 1.39% IV, besides unidentified constituents. At 225-35.degree., the conversion of II to I was up to 65-8%. Similarly, hydrogenation over an industrial catalyst contg. 30% WS2 and 70% Al2O3 was effected at 228-72.degree. and an initial H pressure of min. 80-90 kg./cm.2.; after 55 min. at 246.degree., the product contained 73.19% I, 16.58% II, and 0.45% IV. At 250-70.degree., up to 85-90% II was converted into I. The compns. of the products were tabulated and gas chromatograms were shown. Orienting expts. were made also with WS2 alone (at 237.degree.) and Raney Ni (active form W2) with purified quinoline at 110-17.degree.. The ns of the products were suitable criteria for detg. the content of I in its rich mixts. with the quinoline bases.

IT 91-22-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of crude fraction of, from tar)

RN 91-22-5 CAPLUS

CN Quinoline (8CI, 9CI) (CA INDEX NAME)



CC 52 (Coal and Coal Derivatives)

ST HYDROGENATION COAL TAR QUINOLINES; QUINOLINES COAL TAR HYDROGENATION; COAL TAR QUINOLINES HYDROGENATION

IT Hydrogenation

(of quinoline (crude) separated from tar)

IT 91-63-4 120-72-9 491-35-0 611-32-5 612-60-2 877-43-0 1125-80-0  
1198-37-4 1463-17-8 1721-93-3

RL: USES (Uses)

(chromatog. (gas) of)

IT 91-22-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of crude fraction of, from tar)

IT 635-46-1P

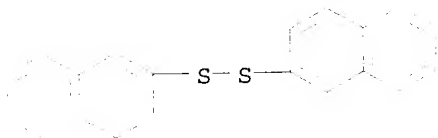
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. of)

L24 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1967:11427 CAPLUS

KOROMA EIC1700

DOCUMENT NUMBER: 66:11427  
 TITLE: Photochemically curing polyester **compositions**  
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
 SOURCE: Neth. Appl., 9 pp.  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
NL 6517086		19660701		
PRIORITY APPLN. INFO.:		DE	19641231	
AB	The title compds. (I) are obtained by adding 0.1-5% diaryl disulfides (II) to a mixt. of unsatd. polyesters (III) and copolymerizable monomers. I are cured at room temp. by irradiation with uv rays between 2500 and 4500 A. They are used as one-pot curable films and molding compds. Peroxides may be added to increase the curing and stabilizers may be added to increase the pot-life. By interrupting the irradiation, the polymerization may be stopped at an intermediate stage and prepolymers can be prepd. Thus, a 65% soln. of III (prepd. from maleic anhydride 152, phthalic anhydride 141, and 1,2-propanediol 195 parts) in styrene (IV) is mixed with 0.5% by wt. hydroquinone, 20% IV, 4% of a 2.5% soln. of <b>paraffin</b> in IV and 2% of the following II: (PhS) <sub>2</sub> , di-.beta.-naphthyl disulfide, (p-ClC <sub>6</sub> H <sub>4</sub> S) <sub>2</sub> , (2,4-Cl <sub>2</sub> C <sub>6</sub> H <sub>3</sub> S) <sub>2</sub> and (p-MeC <sub>6</sub> H <sub>4</sub> S) <sub>2</sub> . The solns. are cast to 240 .mu. thick films and irradiated with a Hg uv lamp (700 w.) at 40 cm. until the <b>paraffin</b> sep. and postcured for 30 min. at a distance of 16 cm. The following sepn. times are measured, resp.: 2, 2, 2.5, 2.5, and 2 min. The cured film has a pencil hardness of 6H.			
IT	5586-15-2			
	RL: USES (Uses)			
	(crosslinking of polyesters contg., by uv irradiation)			
RN	5586-15-2 CAPLUS			
CN	Disulfide, di-2-naphthalenyl (9CI) (CA INDEX NAME)			



IC C08F  
 CC 36 (Plastics Manufacture and Processing)  
 ST FILMS POLYESTER; UV CURED POLYESTERS; PHOTOCHEM CURING POLYESTERS; CURING POLYESTERS PHOTOCHEM; POLYESTER FILMS  
 IT Light, ultraviolet, chemical and physical effects  
 (crosslinking by, of aryl disulfide-contg. polyesters)  
 IT Polyesters, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking of aryl disulfide-contg., by uv irradiation)

IT Crosslinking  
(of diaryl disulfides-contg. polyesters, by uv irradiation)

IT 103-19-5 882-33-7 1142-19-4 **5586-15-2** 15433-50-8

RL: USES (Uses)  
(crosslinking of polyesters contg., by uv irradiation)